

Claims

- [c1] 1.A power system, comprising:
a primary power source in electrical communication with a bus and a bridging power source, wherein said bridging power source comprises at least one of a capacitor, a battery, and an electrolysis cell, and said bridging power source is in electrical communication with said bus; and
a secondary power source in electrical communication with said bus, wherein said secondary power source comprises a fuel cell.
- [c2] 2.The power system of Claim 1, further comprising a converter electrically disposed between and in electrical communication with said primary power source and said bridging power source.
- [c3] 3.The power system of Claim 1, further comprising a controller electrically disposed between and in operable communication with said bus and said bridging power source, and electrically disposed between and in operable communication with said bus and said secondary power source, wherein said controller initiates said bridging power source providing power if said primary power source exhibits first selected characteristics and said secondary power source exhibits second selected characteristics.
- [c4] 4.The power system of Claim 3, wherein said controller further comprises a DC-DC power supply for converting an output voltage from at least one of said secondary power source and said bridging power source to a voltage corresponding to said bus.
- [c5] 5.The power system of Claim 1, wherein said capacitor has a capacitance of about 1,000 μ F to about 7,700 μ F.
- [c6] 6.The power system of Claim 1, wherein said capacitor exhibit a voltage about 5 times to about 10 times a voltage of said bus.
- [c7] 7.The power system of Claim 1, wherein said capacitor further has a voltage of greater than or equal to about 250 volts.
- [c8] 8.The power system of Claim 1, wherein said bridging power source comprises

a capacitor.

- [c9] 9.The power system of Claim 1, wherein said bridging power source comprises an electrolysis cell.
- [c10] 10.A method for operating a power system, comprising:
monitoring a primary power source;
if said primary power source exhibits selected characteristics:
directing power from a bridging power source to a bus and initiating a secondary power source, wherein said secondary power source comprises a fuel cell, and wherein said bridging power source comprises at least one of a capacitor, a battery, and an electrolysis cell;
unless said secondary power source exhibits said selected characteristics,
powering said bus with said secondary power source and ceasing said directing power from said bridging power source.
- [c11] 11. The method of Claim 10, further comprising providing power for selected loads with said bridging power source if said secondary power source exhibits said second selected characteristics, wherein said selected loads comprise status and diagnostics.
- [c12] 12.The method of Claim 11, wherein said directing further comprises converting a first voltage from said bridging power source to a second voltage and introducing said second voltage to said bus.
- [c13] 13.The method of Claim 10, further comprising recharging said bridging power source with power from said primary power source.
- [c14] 14.The method of Claim 10, further comprising recharging said bridging power source with power from said secondary power source.
- [c15] 15.The method of Claim 10, wherein said first selected characteristics and said second selected characteristics, individually include at least one of, unavailable inoperable, inadequate to provide power at expected parameters, and unfueled.
- [c16] 16.The method of Claim 10, wherein said bridging power source comprises a capacitor.

- [c17] 17.The method of Claim 10, wherein said bridging power source comprises an electrolysis cell.
- [c18] 18.A method for operating a power system, comprising:
if a primary power source exhibits first selected characteristics and a secondary power source comprising a fuel cell exhibits second selected characteristics,
powering selected loads with an electrolysis cell,
wherein said first selected characteristics and said second selected characteristics, individually include at least one of, unavailable inoperable, inadequate to provide power at expected parameters, and unfueled.
- [c19] 19.A storage medium encoded with a machine readable computer program code, said code including instructions for causing a computer to implement a method for operating a power system, the method comprising:
if said primary power source exhibits first selected characteristics and a secondary power source comprising a fuel cell exhibits second selected characteristics, powering selected loads with an electrolysis cell,
wherein said first selected characteristics and said second selected characteristics, individually include at least one of, unavailable inoperable, inadequate to provide power at expected parameters, and unfueled.
- [c20] 20.A computer data signal, said computer data signal, comprising:
instructions for causing a computer to implement a method for operating a power system, the method comprising:
monitoring a primary power source;
if said primary power source exhibits selected characteristics:
directing power from a bridging power source to a bus and initiating a secondary power source, wherein said secondary power source comprises a fuel cell, and wherein said bridging power source comprises at least one of a capacitor, a battery, and an electrolysis cell;
unless said secondary power source exhibits said selected characteristics,
powering said bus with said secondary power source and ceasing said directing power from said bridging power source.